YGMOS Technology CO. LTD

100V N-Channel Enhancement-Mode Mosfet　　100V N 沟道增强型 MOS 管

V_{DS}≤100V

$R_{DS(ON)}$, Vgs@10V, Ids@25A ≤ 12mΩ

$R_{DS(ON)}$, Vgs@4.5V, Ids@25A ≤15.5mΩ

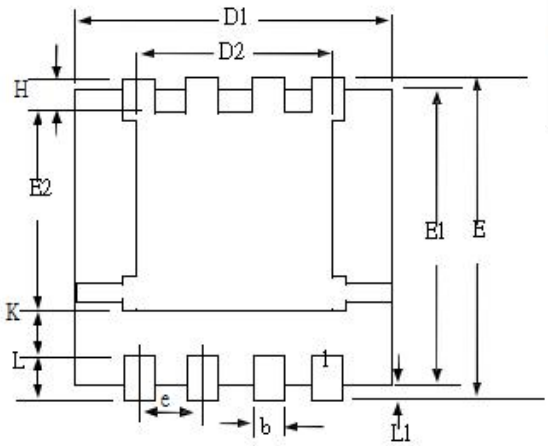
Features　特性

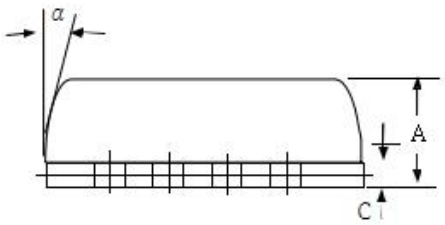
Advanced trench process technology　高级的加工技术

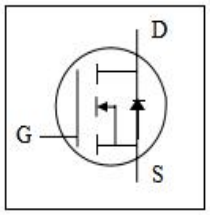
High Density Cell Design For Ultra Low On-Resistance　极低的导通电阻高密度的单元i

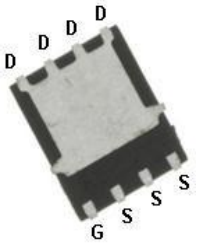
PDFN5* 6

Package Dimensions　封装尺寸及外形图









Bottom View　　**Top View**

SYMBOLS	Millimeters		
	MIN	NOM	MAX
A	0.9	1.1	1.3
b	0.33	0.41	0.51
c	0.15	-	-
D1	4.8	4.9	5.1
D2	-	-	4.4
E	5.8	6	6.2
E1(Ref.)	5.6	5.75	5.9
E2(Ref.)	3.3	3.55	3.8
e	1.27BSC		
H	-	-	0.9
K(Ref.)	0.7	-	-
L	0.35	0.55	0.75
L1	-	-	0.2
α	0°	-	12°

Maximum Ratings and Thermal Characteristics (T_A = 25 ℃ unless otherwise noted)　25 ℃极限参数和热特性

Parameter 极限参数		Symbol 符号	Limit 范围	Unit 单位
Drain-Source Voltage 漏源电压		V_{DS}	100	V
Gate-Source Voltage 栅源电压		V_{GS}	±20	
Continuous Drain Current 连续漏极电流		I_D	34	A
Pulsed Drain Current 脉冲漏极电流		I_{DM}	100	
Maximum Power Dissipation 最大耗散功率	TA = 25℃	P_D	55	W
	TA = 75℃		36	
Operating Junction and Storage Temperature Range 使用及储存温度		T_J, T_{stg}	-55 to 150	℃
Junction-to-Ambient Thermal Resistance (PCB mounted) 结环热阻		$R_{\theta JA}$	50	℃/W
Junction-to-Case Thermal Resistance 结壳热阻		R_{qJC}	2.4	

*The device mounted on 1in2 FR4 board with 2 oz copper

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ELECTRICAL CHARACTERISTICS 一般电气特性						
Parameter 参数	**Symbol 符号**	**Test Condition 测试条件**	**Minimum 最小值**	**Typical 典型值**	**Maximum 最大值**	**Unit 单位**
Static 静态参数						
Drain-Source Breakdown Voltage 漏源击穿电压	BV_{DSS}	V_{GS} = 0V, I_D = 250uA	100			V
Drain-Source On-State Resistance 漏源导通电阻	$R_{DS(on)}$	V_{GS} = 10V, I_D = 25A		8.8	12	mΩ
Drain-Source On-State Resistance 漏源导通电阻	$R_{DS(on)}$	V_{GS} = 4.5V, I_D=25A		12.4	15.5	
Gate Threshold Voltage 开启电压	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D = 250uA	1	1.4	3	V
Zero Gate Voltage Drain Current 零栅压漏极电流	I_{DSS}	V_{DS} = 24V, V_{GS} = 0V			1	uA
Gate Body Leakage 漏极短路时截止栅电流	I_{GSS}	V_{GS} = ± 20V, V_{DS} = 0V			±100	nA
Forward Transconductance 正向跨导	g_{fs}	V_{DS} = 5V, I_D = 20A		45		S
Dynamic 动态参数						
Total Gate Charge 栅极总电荷	Q_g	V_{DS} = 15V, V_{GS} = 4.5V, I_D= 17A		35		nC
Gate-Source Charge 栅-源极电荷	Q_{gs}			3		
Gate-Drain Charge 栅-漏极电荷	Q_{gd}			13		
Turn-On Delay Time 导通延迟时间	$t_{d(on)}$	V_{DD} = 15V, R_G=6Ω I_D = 12A, V_{GS} = 4.5V		13.8		ns
Turn-On Rise Time 导通上升时间	t_r			14.8		
Turn-Off Delay Time 关断延迟时间	$t_{d(off)}$			57.6		
Turn-Off Fall Time 关断下降时间	t_f			16.1		
Input Capacitance 输入电容	C_{iss}	V_{DS} = 8V, V_{GS} = 0V f = 1MHz		2618		pF
Output Capacitance 输出电容	C_{oss}			325		
Reverse Transfer Capacitance 反向传输电容	C_{rss}			21		
Source-Drain Diode 源漏二极管参数						
Max. Diode Forward Current 最大正向电流	I_S				4	A
Diode Forward Voltage 正向电压	V_{SD}	I_S = 1A, V_{GS} = 0V			1.1	V

Note: Pulse test: pulse width <= 300us, duty cycle<= 2%注意：脉冲测试：脉冲宽度<=300us死区<= 2%